

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number  
**WO 2004/088327 A1**

(51) International Patent Classification<sup>7</sup>: **G01N 35/00**

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(21) International Application Number:  
PCT/AU2004/000407

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 31 March 2004 (31.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2003901871 31 March 2003 (31.03.2003) AU

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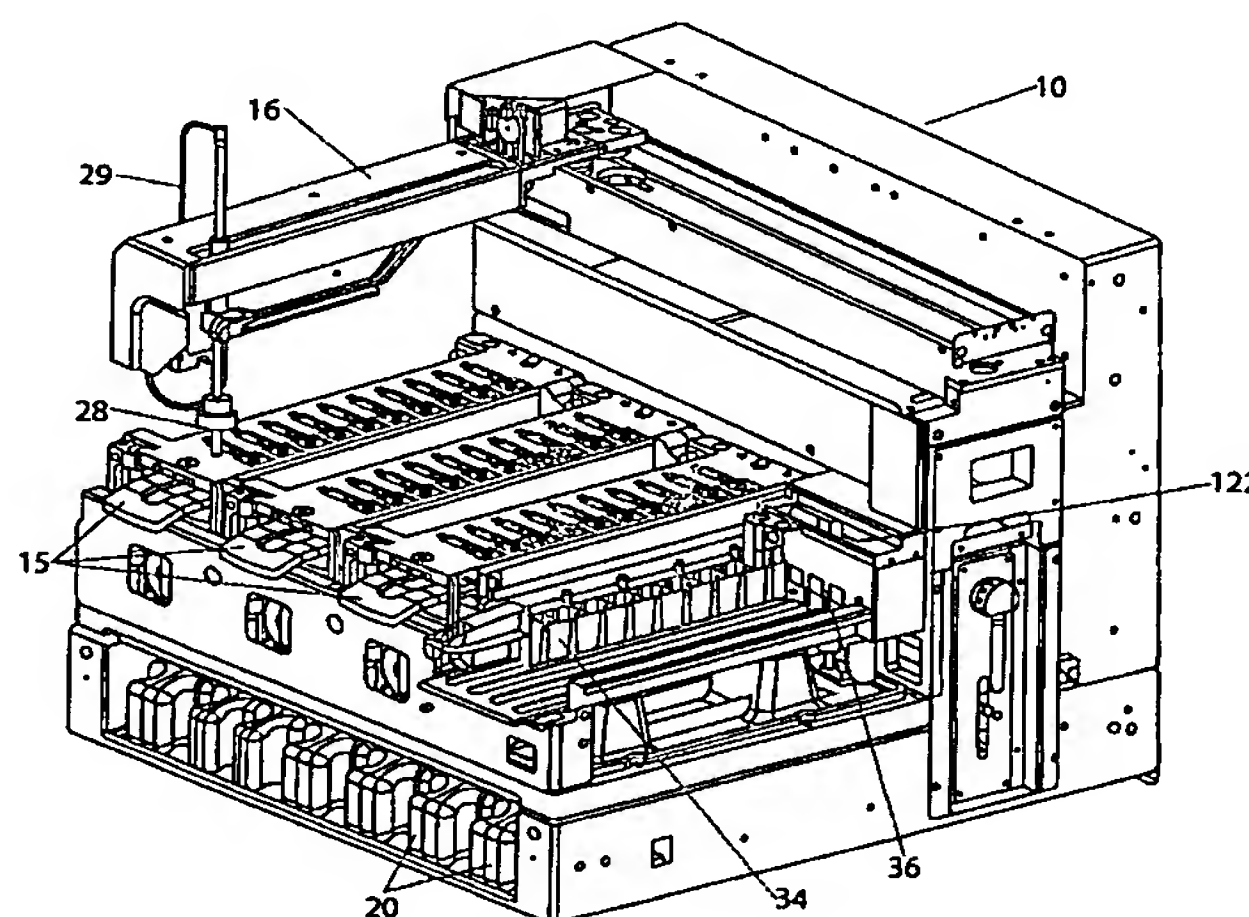
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A METHOD AND APPARATUS FOR FLUID DISPENSATION, PREPARATION AND DILUTION



(57) Abstract: A mixing vial is provided for an automated biological reaction apparatus typically used for staining tissue samples in Immuno-histological and in-situ hybridisation reactions. The mixing vial allows reagents placed on the apparatus to be mixed together to form additional or blended reagents. A reagent dispenser mounted on a robotic arm withdraws reagent from the reagent containers and deposits it into one of the mixing vials. Several reagents can be deposited into each vial. Mixing is undertaken by withdrawing the reagents in a vial and re-dispensing the reagent back into the vial. Mixing may take place between the operation of other tasks performed by the apparatus, and a scheduler is used to ensure blended reagent is provided before it is required in one of the processes undertaken on the apparatus. The apparatus is able to automatically identify which blended reagents are required and when they must be applied to provide an appropriate schedule that minimises time taken to stain samples.